Claims:

1. A system for processing input data to generate output data comprising:

an input module operable for accepting input;

a processing module; and

a output module operable for outputting output data to a user,

wherein the output data comprises data relating to a chemical product, function or service.

2. A method for generating output data useful for a specific purpose comprising:

inputting data into a processing module; and

processing the input data to generate output data,

wherein the output data comprises data relating to a chemical product, function or service.

3. A computer-readable medium containing computer-executable instructions for processing data comprising:

computer program code for receiving input data from a user;

computer program code for processing said input data and generating output data;

wherein the output data comprises data relating to a chemical product, function or service.

4. The system of claim 1 for facilitating the calculation of resins for coatings, inks and adhesives applications, said processing module comprising:

a processing module operable for calculating a reactor charge and theoretical resin properties based on the input, wherein the processing module is also operable for generating output data about the reactor charge and the theoretical resin properties; and

said output module comprising a display module operable for displaying the output data to a user.

5. The system of claim 4 wherein the input data comprises at least a raw material selection and certain resin parameters.

6. The system of claim 5 wherein the certain resin parameters comprises at least a plurality of a name of a monomer, a molecular weight of the monomer, a number of acid

functional groups on the monomer, a number of hydroxyl functional groups on the monomer, a condensate from the acid, a condensate from the hydroxyl, a weight fraction monomer in the resin, a weight fraction moiety in the monomer and/or a raw material cost.

7. The system of claim 5 wherein said output data comprises a tabular process log of the reactor charge's polymerization .

8. The system of claim 5 wherein said output data comprises a graphical representation of the reactor charge's polymerization.

9. The system of claim 4 wherein the user accesses said system via the Internet.

10. The method of claim 2 for facilitating the calculation of resins for coatings, inks and adhesives applications comprising:

inputting information about a material;

calculating a reactor charge and predicting properties of a resin based on the information; and

displaying the reactor charge and the predicted properties of the resin to the user.

11. The method of claim 10 wherein the information comprises at least a raw material selection and certain resin parameters.

12. The method of claim 11 wherein the certain resin parameters comprises at least a plurality of a name of a monomer, a molecular weight of the monomer, a number of acid functional groups on the monomer, a number of hydroxyl functional groups on the monomer, a condensate from the acid, a condensate from the hydroxyl, a weight fraction monomer in the resin, a weight fraction moiety in the monomer, and/or a raw material cost.

13. The computer-readable medium of claim 3 for facilitating the generation of resins for coatings, inks and adhesives applications comprising:

computer program code for receiving input from a user via the Internet;

computer program code for calculating a reactor charge and predicting properties of a resin based on the input from the user;

computer program code for displaying the reactor charge and the predicted properties of the resin to the user.

14. The system of claim 1 for predicting the standard adhesive properties for a component blend, said processing module comprising:

a processing module operable for calculating standard adhesive properties of at least one component blend based on the input, wherein the processing module is also operable for generating output data about the standard adhesive properties of the at least one component blend; and

said output module comprising a display module operable for displaying the output data to a user.

15. The system of claim 14 wherein said input comprises a formulation of at least one component blend.

16. The system of claim 14 wherein said standard adhesive properties comprise at least one of 180-peel strength, PolyKen tack, rolling ball tack, quick stick, room temperature hold power, and shear adhesive failure temperature.

17. The system of claim 15 wherein said output data comprises tabular data of the standard adhesive properties of the at least one component blend.

18. The system of claim 14 wherein said output data comprises at least one graphical representation of the standard adhesive properties of the at least one component blend.

19. The system of claim 14 wherein the user accesses said system via the Internet.

20. The method of claim 2 for predicting the standard adhesive properties for a component blend comprising:

inputting information about a component blend;

calculating at least one standard adhesive property of the component blend based on the information; and

displaying the at least one standard adhesive property of the component blend to the user.

21. The method of claim 20 wherein the information comprises a formulation of at least one component blend.

22. The computer-readable medium of claim 3 for predicting the standard adhesive properties for a component blend comprising:

computer program code for receiving input from a user via the Internet;

computer program code for calculating at least one standard adhesive property of the component blend based on the input from the user;

computer program code for displaying the at least one standard adhesive property of the component blend to the user.

23. The system of claim 1 for predicting the intrinsic viscosity degradation of a material, said processing module comprising:

a processing module operable for using the input to calculate a predicted intrinsic viscosity of a material after each pass through an extruder, wherein the processing module is also operable for generating output data about the predicted intrinsic viscosity of the material; and

said output module comprising a display module operable for displaying the output data to a user.

24. The system of claim 23 wherein the input comprises at least a virgin resin intrinsic viscosity, a pellet feed temperature, a melt temperature, a virgin resin moisture content, a regrind ratio, and a regrind moisture.

25. The system of claim 23 wherein said output data comprises a graphical representation of at least one of the following: regrind effect; virgin resin intrinsic viscosity

effect; melt temperature effect; feed temperature effect; passes graph; regrind moisture effect; and virgin resin moisture effect.

26. The system of claim 23 wherein said output data comprises a tabular representation of the predicted intrinsic viscosity of the material after each pass through the extruder.

27. The system of claim 23 wherein the user accesses said system via the Internet.

28. The method of claim 2 for predicting the intrinsic viscosity degradation of a material comprising:

inputting information about a material;

calculating a predicted intrinsic viscosity of the material after each pass through an extruder based on said information; and

displaying the predicted intrinsic viscosity of the material after each pass through the extruder to the user.

29. The method of claim 28 wherein said information comprises at least a virgin resin intrinsic viscosity, a pellet feed temperature, a melt temperature, a virgin resin moisture content, a regrind ratio, and a regrind moisture.

30. The computer-readable medium of claim 3 for predicting the intrinsic viscosity degradation of a material comprising:

computer program code for receiving input from a user via the Internet;

computer program code for calculating a predicted intrinsic viscosity of a material after each pass through an extruder based on the input from the user;

computer program code for displaying the predicted intrinsic viscosity of the material after each pass through the extruder to the user.

31. The system of claim 1 for estimating the part costs of an injection molded material, said processing module comprising:

a processing module operable for calculating an estimated part cost based on the input, wherein the processing module is also operable for generating output data about the estimated part cost; and

said output module comprising a display module operable for displaying the output data to a user.

32. The system of claim 31 wherein said input comprises at least a part mass, a runner mass, a material cost, a number of cavities, an estimated cycle time, a reject rate, a percent of rejects reground, an equipment cost, an equipment amortization time, a mold cost, a mold amortization time, a number of operating hours per week, a project downtime, a machine cost, a secondary operations cost, an overhead expenses cost, and a miscellaneous expenses cost.

33. The system of claim 32 wherein said output data comprises tabular data of the estimated part cost.

34. The system of claim 31 wherein said output data comprises at least one graphical representation of the estimated part cost.

35. The system of claim 31 wherein the user accesses said system via the Internet.

36. The method claim 2 for estimating the part costs of an injection molded material comprising:

inputting information about a part;

calculating an estimated part cost based on said information; and

displaying the estimated part cost to the user.

37. The method of claim 36 wherein said information comprises at least a part mass, a runner mass, a material cost, a number of cavities, an estimated cycle time, a reject rate, a percent of rejects reground, an equipment cost, an equipment amortization time, a mold cost, a mold amortization time, a number of operating hours per week, a project downtime, a machine cost, a secondary operations cost, an overhead expenses cost, and a miscellaneous expenses cost.

38. The computer-readable medium of claim 3 for estimating the part costs of an injection molded material comprising:

computer program code for receiving input from a user via a website;

computer program code for calculating an estimated part cost of an injection molded material based on the input from the user;

computer program code for displaying the estimated part cost to a user.

39. The system of claim 1 for calculating the melt viscosity of a material, said processing module comprising:

a processing module operable for calculating a melt viscosity of a material based on the input, wherein the processing module is also operable for generating output data about the melt viscosity of the material; and

and said output module comprising a display module operable for displaying the output data to a user.

40. The system of claim 39 wherein said input comprises at least an intrinsic viscosity of the material and at least one temperature.

41. The system of claim 40 wherein said output data comprises tabular data of the melt viscosity of the material.

42. The system of claim 40 wherein said output data comprises at least one graphical representation of the melt viscosity of the material.

43. The system of claim 39 wherein the user accesses said system via the Internet.

44. The method of claim 2 for calculating the melt viscosity of a material comprising:

inputting information about a material;

calculating a melt viscosity of the material based on the information; and

displaying the melt viscosity of the material to the user.

45. The method of claim 44 wherein the information comprises at least an intrinsic viscosity of the material and at least one temperature.

46. The computer-readable medium of claim 3 for calculating the melt viscosity of a material comprising:

computer program code for receiving input from a user via the Internet;

computer program code for calculating a melt viscosity of a material based on the input from the user;

computer program code for displaying the melt viscosity of the material to the user.

47. The system of claim 1 for calculating the theoretical strain that occurs when a snap-fit latch is deflected, said processing module comprising:

a processing module operable for calculating a theoretical strain of a snap-fit latch based on the input, wherein the processing module is also operable for generating output data about the theoretical strain of the snap-fit latch; and

and said output module comprising a display module operable for displaying the output data to a user.

48. The system of claim 47 wherein the input comprises at least a material, a brand, and snap-fit latch dimensions.

49. The system of claim 48 wherein said output data comprises tabular data of the theoretical strain of the snap-fit latch.

50. The system of claim 47 wherein the user accesses said system via the Internet.

51. The method of claim 2 for calculating the theoretical strain that occurs when a snap-fit latch is deflected comprising:

inputting information about a snap-fit latch;

calculating a theoretical strain of the snap-fit latch based on the information; and

displaying the theoretical strain of the snap-fit latch to the user.

52. The method of claim 51 wherein the information comprises at least a material, a brand, and snap-fit latch dimensions.

53. The computer-readable medium of claim 3 for calculating the theoretical strain that occurs when a snap-fit latch is deflected comprising:

computer program code for receiving input from a user via the Internet;

computer program code for calculating the theoretical strain that occurs when a snap-fit latch is deflected based on the input from the user;

computer program code for displaying the theoretical strain of the snap-fit latch to the user.

54. The system of claim 1 for calculating the minimum coolant flow rate that is needed to achieve turbulent flow in a component, said processing module comprising:

a processing module operable for calculating a minimum coolant flow rate based on the input, wherein the processing module is also operable for generating output data about the calculated minimum coolant flow rate; and

and said output module comprising a display module operable for displaying the output data to a user.

55. The system of claim 54 wherein said input comprises at least a component type and a drill size.

56. The system of claim 55 wherein said output data comprises tabular data of the calculated minimum coolant flow rate.

57. The system of claim 54 wherein the user accesses said system via the Internet.

58. The method of claim 2 for calculating the minimum coolant flow rate that is needed to achieve turbulent flow in a component comprising:

inputting information about a component;

calculating a minimum coolant flow rate based on the input; and

displaying the minimum coolant flow rate to the user.

59. The method of claim 58 wherein the information comprises at least a component type and a drill size.

60. The computer-readable medium of claim 3 for calculating the minimum coolant flow rate that is needed to achieve turbulent flow in a component comprising:

computer program code for receiving input from a user via the Internet;

computer program code for calculating a minimum coolant flow rate that is needed to achieve turbulent flow in a component based on the input from the user;

computer program code for displaying the minimum coolant flow rate that is needed to achieve turbulent flow in the component to the user.

61. The system of claim 1 comprising:

an oxygen ingress input;

an oxygen ingress calculation algorithm processing module; and.

an oxygen ingress output display.

62. The system of claim 61 , wherein said oxygen ingress input comprises a dimension of a container.

63. The system of claim 62, wherein said container comprises a Polyethylene Terephthalate bottle.

64. The system of claim 61, wherein said oxygen ingress input comprises at least one of a container type, an oxygen transmission detail, an initial container oxygen content, an oxygen exposure limit, and/or a time to reach an oxygen exposure limit.

65. The system of claim 61, wherein oxygen ingress output display comprises at least one of an oxygen ingress for a specified shelf life; a container image; a transmission rate; an oxygen exposure limit; and/or a graph.

66. The method of claim 2 comprising:
accepting an oxygen ingress input;
performing an oxygen ingress calculation with said oxygen ingress input; and
providing an output from said oxygen ingress calculation.

67. The method of claim 66, wherein said oxygen ingress input comprises a dimension of a container.

68. The method of claim 67, wherein said container comprises a Polyethylene Terephthalate bottle.

69. The method of claim 66, wherein said oxygen ingress input comprises at least one of a container type; an oxygen transmission detail; an initial container oxygen content; an oxygen exposure limit; a time to reach an oxygen exposure limit; and/or an oxygen ingress for a specified shelf life.

70. The method of claim 66, wherein said oxygen ingress output comprises at least one of a container image; a transmission rate; an oxygen exposure limit and/or a graph.

71. The system of claim 1 comprising:
an inhibitor recommendation input;
an inhibitor recommendation calculation algorithm processing module; and.
an inhibitor recommendation output display.

71. The system of claim 71, wherein said inhibitor recommendation input comprises at least one of a performance characteristic; an importance rating of said performance characteristic.

72. The system of claim 71, wherein said inhibitor recommendation calculation algorithm comprises a inhibitor rating calculation algorithm.

73. The system of claim 71, wherein said inhibitor recommendation output display comprises at least one of a recommended inhibitor; and

an inhibitor rating, wherein said inhibitor rating demonstrates the degree to which said recommended inhibitor matches said inhibitor recommendation input.

74. The method of claim 2 comprising:

accepting an inhibitor recommendation input;

performing an oxygen ingress calculation with said oxygen ingress input; and

providing an inhibitor recommendation output from said oxygen ingress calculation.

75. The method of claim 74, wherein said inhibitor recommendation input comprises at least one of a performance characteristic and/or an importance rating of said performance characteristic.

76. The method of claim 74, wherein said step of performing an oxygen ingress calculation comprises determining a rating of an inhibitor.

77. The method of claim 74, wherein said inhibitor recommendation output comprises: a recommended inhibitor; and an inhibitor rating, wherein said inhibitor rating demonstrates the degree to which said recommended inhibitor matches said inhibitor recommendation input.

78. The system of claim 1 comprising:

a plasticizer formulation input form; and

a plasticizer formulation transmitter.

79. The system of claim 78, wherein said plasticizer formulation comprises a compound.

80. The system of claim 78, wherein said plasticizer formulation comprises a plastisol.

81. The system of claim 78, further comprising a plasticizer formulation analyzer.

82. The system of claim 79, further comprising a plasticizer formulation optimizer.

83. The system of claim 79, further comprising a plasticizer formulation output.

84. The system of claim 83, wherein said plasticizer formulation output comprises a physical property summary.

85. The system of claim 83, wherein said plasticizer formulation output comprises an optimized plasticizer formulation.

86. The method of claim 2 comprising:
accepting a plasticizer formulation; and
forwarding said plasiticizer formulation input to a technical support group.

87. The method of claim 86, wherein said plasticizer formulation comprises a compound.

88. The method of claim 86, wherein said plasticizer formulation comprises a plastisol.

89. The method of claim 86, further comprising analyzing said plasticizer formulation.

90. The method of claim 89, further comprising optimizing said plasticizer formulation.

91. The method of claim 86, further comprising providing a plasticizer formulation output.

92. The method of claim 91, wherein said plasticizer formulation output comprises a physical property summary.

93. The method of claim 91, wherein said plasticizer formulation output comprises an optimized plasticizer formulation.

94. The system of claim 1 comprising:

accepting an anti-oxidant input;

performing an anti-oxidant calculation with said anti-oxidant input using said processing module; and

providing an output from said anti-oxidant calculation.

95. The system of claim 94, wherein said anti-oxidant input comprises at least one of a food product type; an anti-oxidant solution; a quantity of ingredient in a product; a regulation type and/or a desired anti-oxidant concentration.

96. The system of claim 95, wherein said anti-oxidant output comprises at least one of a total anti-oxidant concentration; an anti-oxidant level in a fat content; an anti-oxidant level in an oil content and/or a citric acid measure.

97. The method of claim 2 comprising:

accepting an anti-oxidant input;

performing an anti-oxidant calculation in said processing module with said anti-oxidant input; and providing an output from said anti-oxidant calculation.

98. The method of claim 97, wherein said anti-oxidant input comprises at least one of a food product type; an anti-oxidant solution; a quantity of ingredient in a product; a regulation type and/or a desired anti-oxidant concentration.

99. The method of claim 98, wherein said anti-oxidant output comprises at least one of a total anti-oxidant concentration; an anti-oxidant level in a fat content; an anti-oxidant level in an oil content and/or a citric acid measure.

100. The system of claim 1 comprising:

a weighting agent calculation input for a weighting agent in a beverage formulation;

a weighting agent calculation algorithm processing module; and

a weighting agent calculation output.

101. The system of claim 100, wherein said weighting agent comprises sucrose acetate isobutyrate (SAIB).

102. The system of claim 100, wherein said weighting agent calculation input comprises at least one of:

a desired specific gravity of oil phase;

a SAIB product;

an additional weighting agent;

a flavoring oil

a specific gravity of said flavoring oil;

a percent emulsion desired in said beverage formulation;

a desired dilution ratio; and

a percent of an ingredient.

103. The system of claim 100, wherein said sweighting agent calculation algorithm processing module comprises a desired oil phase specific gravity formulation calculation algorithm.

104. The system of claim 100, wherein said weighting agent calculation algorithm comprises an oil to weighting agent ratio oil phase specific gravity calculation algorithm.

105. The system of claim 102, wherein said weighting agent calculation output comprises at least one of an emulsion composition; and./or an oil phase component in said beverage formulation.

106. The method of claim 2 comprising:

accepting a weighting agent calculation input for a weighting agent in a beverage formulation;

performing a weighting agent calculation with said weighting agent calculation input; and

providing a weighting agent calculation output.

107. The method of claim 106, wherein said weighting agent comprises sucrose acetate isobutyrate (SAIB).

108. The method of claim 106, wherein said weighting agent calculation input comprises at least one of:

a desired specific gravity of oil phase;

a SAIB product;

an additional weighting agent;

a flavoring oil

a specific gravity of said flavoring oil;

a percent emulsion desired in said beverage formulation;

a desired dilution ratio; and

a percent of an ingredient.

109. The method of claim 106, wherein said step of performing a weighting agent calculation comprises formulating said beverage formulation to a desired oil phase specific gravity.

110. The method of claim 109, wherein said step of performing a weighting agent calculation comprises calculating an oil phase specific gravity from a ratio of an oil to said weighting agent.

111. The method of claim 106, wherein said weighting agent calculation output comprises an emulsion composition and/or an oil phase component in said beverage formulation.

112. The system of claim 1 comprising:

a solvent reformulation input;

a solvent calculation algorithm processing module; and

a solvent reformulation output.

113. The system of claim 112, wherein said solvent reformulation input comprises at least one of:

a solvent;

a percentage of said solvent in a blend; and/or

a cost of said solvent.

114. The system of claim 112, wherein said solvent calculation algorithm processing module comprises a solvent reformulation algorithm.

115. The system of claim 113, wherein said solvent calculation algorithm comprises a solvent formulation analysis algorithm.

116. The system of claim 96, wherein said solvent reformulation output comprises at least one of an optimum solvent blend; a lowest-cost solvent blend; a solvent detail report; an evaporation detail report; and/or a summary report.

117. The method of claim 2 comprising:

accepting a solvent reformulation input;

performing a solvent calculation algorithm with said solvent reformulation input; and

providing a solvent reformulation output.

118. The method of claim 117, wherein said solvent reformulation input comprises at least one of:

a solvent;

a percentage of said solvent in a blend; and

a cost of said solvent.

119. The method of claim 117, wherein said solvent calculation algorithm comprises a solvent reformulation algorithm.

120. The method of claim 119, wherein said solvent calculation algorithm comprises a solvent formulation analysis algorithm.

121. The method of claim 118, wherein said solvent reformulation output comprises at least one of an optimum solvent blend; a lowest-cost solvent blend; a solvent detail report; a evaporation detail report and/or a summary report.